hydrogenethylsilsesquioxane, hydrogenmethylsilsesquioxane, hydrogenethylsilsesquioxane, hydrogenethylsilsesquioxane, hydrogenetert-butylsilsesquioxane and hydrogenethylsilsesquioxane, polyimides, fluorinated and nonfluorinated poly(arylethers), methylated/siloxane polymers; polymers having the formulae  $[(HSiO_{1.5})_xO_y(RSiO_{1.5})_z]_n$ ,  $[(HSiO_{1.5})_x(RSiO_{1.5})_y]_n$  and  $[(HSiO_{1.5})_xO_y(RSiO_{1.5})_z]_n$  wherein x= about 6 to about 20, y=1 to about 3, z= about 6 to about 20, n=1 to about 4,000, and each R is independently  $C_1$  to  $C_8$  alkyl or  $C_6$  to  $C_{12}$  aryl; organic silicon containing polymers having the formulae

$$\begin{split} &[H\text{-}SiO_{1.5}]_n[R\text{-}SiO_{1.5}]_m \qquad , \\ &[H_{0.4}\text{-}SiO_{1.5+1.8}]_n[R_{0.4+1.0}\text{-}SiO_{1.5+1.8}]_m \ , \\ &[H_{0-1.5}\text{-}SiO_{1.5+2.0}]_n[R\text{-}SiO_{1.5}]_m \qquad , \\ &[H\text{-}SiO_{1.5}]_x[R\text{-}SiO_{1.5}]_y[SiO_2]_z \qquad , \end{split}$$

wherein R is selected from substituted and unsubstituted straight chain and branched alkyl groups, cycloalkyl groups, substituted and unsubstituted aryl groups, and mixtures thereof; the sum of n and m, or the sum or x, y and z is from about 8 to about 5000, and m and y are selected such that carbon containing substituents are present in an amount of less than about 40 Mole percent; organic silicon containing polymers having the formulae:

$$\begin{split} &[HSiO_{1.5}]_n [RSiO_{1.5}]_m \\ &[H_{0.4\text{-}1.0}SiO_{1.5\text{-}1.8}]_n [R_{0.4\text{-}1.0}SiO_{1.5\text{-}1.8}]_m \\ &[H_{0\text{-}1.0}SiO_{1.5\text{-}2.0}]_n [RSiO_{1.5}]_m \end{split} \label{eq:hsio_1.5}$$

wherein the sum of n and m is from about 8 to about 5000 and m is selected such that the carbon containing substituent is present in an amount of from about 40 mole percent or greater; and



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 $[HSiO_{1.5}]_x [RSiO_{1.5}]_y [SiO_2]_z;$ 

wherein the sum of x, y and z is from about 8 to about 5000 and y is selected such that the carbon containing substituent is present in an amount of about 40 mole % or greater; and wherein R is selected from substituted and unsubstituted straight chain and branched alkyl groups, cycloalkyl groups, substituted and unsubstituted aryl groups, and mixtures thereof, and mixtures thereof; and (b) an inorganic layer on the organic layer which comprises an inorganic dielectric selected from the group consisting of hydrogensiloxanes, inorganic hydrogensilsesquioxanes and combinations thereof, having metal filled vias therethrough which connect to the metal lines of the organic layer; and wherein the hydrogensiloxanes have the formula  $[(HSiO_{1.5})_xO_y]_n$ , and the hydrogensilsesquioxanes have the formula  $(HSiO_{1.5})_n$ , wherein x= about 6 to about 20, y=1 to about 3, and n=1 to about 4,000.

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- 29. (Amended) A dielectric coated substrate which comprises:
- (a) a first dielectric composition film on a surface of a substrate; and
- (b) a second dielectric composition film on the first dielectric composition film; wherein the first dielectric composition and the second dielectric composition have substantially different etch resistance; wherein either the first dielectric composition film is organic and the second dielectric composition film is inorganic; of the first dielectric composition film is inorganic and the second dielectric composition film is organic; wherein the organic dielectric comprises a dielectric selected from the group consisting of alkoxysilane polymers, organic siloxanes, hydrogenosiloxanes, hydrogenmethylsilsesquioxane, hydrogenethylsilsesquioxane, hydrogenethylsilsesquioxane, hydrogenethylsilsesquioxane and hydrogenphenylsilsesquioxane, polyimides, fluorinated and nonfluorinated

poly(arylethers), methylated siloxane polymers; polymers having the formulae  $[(HSiO_{1.5})_xO_y(RSiO_{1.5})_z]_n$ ,  $[(HSiO_{1.5})_x(RSiO_{1.5})_y]_n$  and  $[(HSiO_{1.5})_xO_y(RSiO_{1.5})_z]_n$  wherein x= about 6 to about 20, y=1 to about 3, z= about 6 to about 20, n=1 to about 4,000, and each R is independently  $C_1$  to  $C_8$  alkyl or  $C_6$  to  $C_{12}$  aryl; organic silicon containing polymers having the formulae

$$\begin{split} &[H\text{-}SiO_{1.5}]_n[R\text{-}SiO_{1.5}]_m \\ &[H_{0.4}\text{-}SiO_{1.5-1.8}]_n[R_{0.4-1.0}\text{-}SiO_{1.5-1.8}]_m \;, \\ &[H_{0-1.0}\text{-}SiO_{1.5-2.0}]_n[R\text{-}SiO_{1.5}]_m \;\;, \\ &[H\text{-}SiO_{1.5}]_x[R\text{-}SiO_{1.5}]_y[SiO_2]_z \;\;, \end{split}$$

wherein R is selected from substituted and unsubstituted straight chain and branched alkyl groups, cycloalkyl groups, substituted and unsubstituted aryl groups, and mixtures thereof, the sum of n and m, or the sum or x, y and z is from about 8 to about 5000, and m and y are selected such that carbon containing substituents are present in an amount of less than about 40 Mole percent; organic silicon containing polymers having the formulae:

$$\begin{split} &[HSiO_{1.5}]_n \, [RSiO_{1.5}]_m \\ &[H_{0.4\text{-}1.0}SiO_{1.5\text{-}1.8}]_n \, [R_{0.4\text{-}1.0}SiO_{1.5\text{-}1.8}]_m \\ &[H_{0\text{-}1.0}SiO_{1.5\text{-}2.0}]_n \, [RSiO_{1.5}]_m \end{split} \label{eq:hsio_1.5}.$$

wherein the sum of mand m is from about 8 to about 5000 and m is selected such that the carbon containing substituent is present in an amount of from about 40 mole percent or greater; and

$$[HSiO_{1.5}]_x [RSiO_{1.5}]_y [SiO_2]_z;$$

wherein the sum of x, y and z is from about 8 to about 5000 and y is selected such that the carbon containing substituent is present in an amount of about 40 mole % or greater; and wherein R is selected from substituted and unsubstituted straight